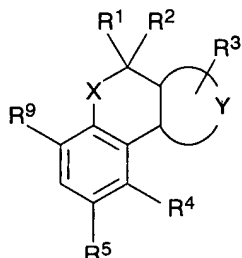


A P P E N D I X I:

CURRENT CLAIMS:

1. A tricyclic benzoylpyrazole compound of formula I



where:

X is a bond;

Y together with the two carbons to which it is attached forms a 1,2-isoxazole ring which is saturated, partially saturated or unsaturated;

R¹, R², R⁶, R⁷ are hydrogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkoxy or C₁-C₆-haloalkoxy;

R³ is halogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkoxy or C₁-C₆-haloalkoxy;

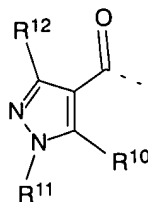
R⁴ is hydrogen, nitro, halogen, cyano, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, C₁-C₆-alkylthio, C₁-C₆-haloalkylthio, C₁-C₆-alkylsulfonyl, C₁-C₆-haloalkylsulfonyl, aminosulfonyl, N-(C₁-C₆-alkyl)aminosulfonyl, N,N-di(C₁-C₆-alkyl)aminosulfonyl, N-(C₁-C₆-alkylsulfonyl)amino, N-(C₁-C₆-haloalkylsulfonyl)amino or N-(C₁-C₆-alkyl)-N-(C₁-C₆-haloalkylsulfonyl)amino;

R⁵ is hydrogen, C₁-C₆-alkyl or halogen;

R⁸ is hydrogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkylcarbonyl, formyl, C₁-C₆-alkoxycarbonyl, C₁-C₆-haloalkoxycarbonyl, C₁-C₆-alkylsulfonyl or C₁-C₆-haloalkylsulfonyl;

l is 0, 1 or 2;

R⁹ is a radical IIa



IIa

where

R¹⁰ is hydroxyl, mercapto, halogen, OR¹³, SR¹³, SO₂R¹⁴, NR¹⁵R¹⁶ or N-bonded heterocyclyl, where the heterocyclyl radical may be partially or fully halogenated and/or may carry one to three of the following radicals:

nitro, cyano, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy or C₁-C₄-haloalkoxy;

R¹¹ is hydrogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₃-C₆-cycloalkyl, hydroxyl, C₁-C₆-alkoxy or C₁-C₆-haloalkoxy;

R¹² is hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, hydroxyl, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, C₁-C₆-alkylthio or C₁-C₆-haloalkylthio;

R¹³ is C₁-C₆-alkyl, C₃-C₆-alkenyl, C₃-C₆-haloalkenyl, C₃-C₆-alkynyl, C₃-C₆-haloalkynyl, C₃-C₆-cycloalkyl, C₁-C₂₀-alkylcarbonyl, C₂-C₂₀-alkenylcarbonyl, C₂-C₆-alkynylcarbonyl, C₃-C₆-cycloalkylcarbonyl, C₁-C₆-alkoxycarbonyl, C₃-C₆-alkenyloxycarbonyl, C₃-C₆-alkynyloxycarbonyl, C₁-C₆-alkylthiocarbonyl, C₁-C₆-alkylaminocarbonyl, C₃-C₆-alkenylaminocarbonyl, C₃-C₆-alkynylaminocarbonyl, N,N-di(C₁-C₆-alkyl)aminocarbonyl, N-(C₃-C₆-alkenyl)-N-(C₁-C₆-alkyl)aminocarbonyl, N-(C₃-C₆-alkynyl)-N-(C₁-C₆-alkyl)aminocarbonyl, N-(C₁-C₆-alkoxy)-N-(C₁-C₆-alkyl)aminocarbonyl, N-(C₃-C₆-alkenyl)-N-(C₁-C₆-alkoxy)aminocarbonyl, N-(C₃-C₆-alkynyl)-N-(C₁-C₆-alkoxy)aminocarbonyl, di(C₁-C₆-alkyl)aminothiocarbonyl, C₁-C₆-alkylcarbonyl-C₁-C₆-alkyl, C₁-C₆-alkoxyimino-C₁-C₆-alkyl, N-(C₁-C₆-alkylamino)imino-C₁-C₆-alkyl or N,N-di(C₁-C₆-alkylamino)imino-C₁-C₆-alkyl, where the abovementioned alkyl, cycloalkyl and alkoxy radicals may be partially or fully halogenated and/or may carry one to three of the following groups:

cyano, C₁-C₄-alkoxy, C₁-C₄-alkylthio, di(C₁-C₄-alkyl)amino, C₁-C₄-alkylcarbonyl, C₁-C₄-alkoxycarbonyl, C₁-C₄-alkoxy-C₁-C₄-alkoxycarbonyl, di(C₁-C₄-alkyl)amino-C₁-C₄-alkoxycarbonyl, hydroxycarbonyl, C₁-C₄-alkylaminocarbonyl, di(C₁-C₄-alkyl)aminocarbonyl, aminocarbonyl, C₁-C₄-alkylcarbonyloxy or C₃-C₆-cycloalkyl;

is phenyl, heterocyclyl, phenyl-C₁-C₆-alkyl, heterocyclyl-C₁-C₆-alkyl, phenylcarbonyl-C₁-C₆-alkyl, heterocyclylcarbonyl-C₁-C₆-alkyl, phenylcarbonyl, heterocyclylcarbonyl, phenoxy-carbonyl, phenyloxythiocarbonyl, heterocyclilyloxycarbonyl,

heterocyclyloxythiocarbonyl, phenylaminocarbonyl, N-(C₁-C₆-alkyl)-N-(phenyl)aminocarbonyl, heterocyclylamino-carbonyl, N-(C₁-C₆-alkyl)-N-(heterocyclyl)aminocarbonyl, phenyl-C₂-C₆-alkenylcarbonyl or heterocyclyl-C₂-C₆-alkenylcarbonyl, where the phenyl and the heterocyclyl radical of the 18 lastmentioned substituents may be partially or fully halogenated and/or may carry one to three of the following radicals:

nitro, cyano, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkoxy, heterocyclyl or N-bonded heterocyclyl, where the two lastmentioned substituents for their part may be partially or fully halogenated and/or may carry one to three of the following radicals:

nitro, cyano, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy or C₁-C₄-haloalkoxy;

R¹⁴ is C₁-C₆-alkyl, C₃-C₆-alkenyl, C₃-C₆-haloalkenyl, C₃-C₆-alkynyl, C₃-C₆-haloalkynyl, C₃-C₆-cycloalkyl, C₁-C₆-alkoxy, di(C₁-C₆-alkyl)amino or di(C₁-C₆-haloalkyl)amino, where the abovementioned alkyl, cycloalkyl and alkoxy radicals may be partially or fully halogenated and/or may carry one to three of the following groups:

cyano, C₁-C₄-alkoxy, C₁-C₄-alkylthio, di(C₁-C₄-alkyl)amino, C₁-C₄-alkylcarbonyl, C₁-C₄-alkoxycarbonyl, C₁-C₄-alkoxy-C₁-C₄-alkoxycarbonyl, di(C₁-C₄-alkyl)amino-C₁-C₄-alkoxycarbonyl, hydroxycarbonyl, C₁-C₄-alkylaminocarbonyl, di(C₁-C₄-alkyl)aminocarbonyl, aminocarbonyl, C₁-C₄-alkylcarbonyloxy or C₃-C₆-cycloalkyl;

is phenyl, heterocyclyl, phenyl-C₁-C₆-alkyl, heterocyclyl-C₁-C₆-alkyl, phenoxy, heterocyclyloxy, where the phenyl and the heterocyclyl radical of the lastmentioned substituents may be partially or fully halogenated and/or may carry one to three of the following radicals:

nitro, cyano, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy or C₁-C₄-haloalkoxy;

R¹⁵ is C₁-C₆-alkyl, C₃-C₆-alkenyl, C₃-C₆-haloalkenyl, C₃-C₆-alkynyl, C₃-C₆-haloalkynyl, C₃-C₆-cycloalkyl, C₁-C₆-alkoxy, C₃-C₆-alkenyloxy, C₃-C₆-alkynyloxy, di(C₁-C₆-alkyl)amino or C₁-C₆-alkylcarbonylamino, where the abovementioned alkyl, cycloalkyl and alkoxy radicals may be partially or fully halo-

generated and/or may carry one to three radicals of the following group:

cyano, C₁-C₄-alkoxy, C₁-C₄-alkylthio, di(C₁-C₄-alkyl)amino, C₁-C₄-alkylcarbonyl, C₁-C₄-alkoxycarbonyl, C₁-C₄-alkoxy-C₁-C₄-alkoxycarbonyl, di(C₁-C₄-alkyl)amino-C₁-C₄-alkoxycarbonyl, hydroxycarbonyl, C₁-C₄-alkylaminocarbonyl, di(C₁-C₄-alkyl)aminocarbonyl, aminocarbonyl, C₁-C₄-alkylcarbonyloxy or C₃-C₆-cycloalkyl;

is phenyl, heterocyclyl, phenyl-C₁-C₆-alkyl or heterocyclyl-C₁-C₆-alkyl, where the phenyl or heterocyclyl radical of the four lastmentioned substituents may be partially or fully halogenated and/or may carry one to three of the following radicals:

nitro, cyano, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy or C₁-C₄-haloalkoxy;

R¹⁶ is C₁-C₆-alkyl, C₃-C₆-alkenyl, C₃-C₆-alkynyl or C₁-C₆-alkylcarbonyl;

or an agriculturally useful salt thereof.

5. The tricyclic benzoylpyrazole compound of formula I defined in claim 1 where

R¹, R² are hydrogen;

R³ is C₁-C₆-alkyl;

R⁴ is nitro, halogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkoxy, C₁-C₆-alkylthio or C₁-C₆-alkylsulfonyl;

R⁵ is hydrogen;

l is 0 or 1.

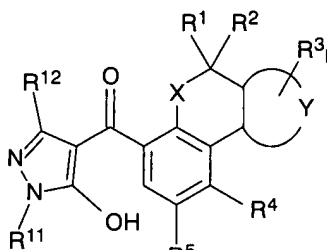
6. The tricyclic benzoylpyrazole compound of formula I defined in claim 1 where

R¹⁰ is hydroxyl;

R¹¹ is C₁-C₆-alkyl or C₃-C₆-cycloalkyl;

R¹² is hydrogen or C₁-C₆-alkyl.

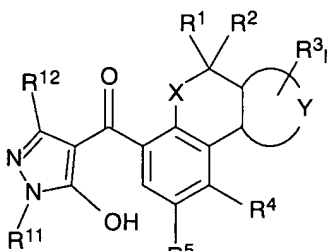
7. A process for preparing the compound of formula I where R¹⁰ = halogen as claimed in claim 1, which comprises reacting a tricyclic benzoylpyrazole compound of formula Ia (= I where R¹⁰ = hydroxyl),



Ia

where the variables R^1 to R^5 , R^{11} and R^{12} , X , Y and l are as defined in claim 1, with a halogenating agent.

8. A process for preparing the compound of formula I where $R^{10} = OR^{13}$ as claimed in claim 1, which comprises reacting a tricyclic benzoylpyrazole compound of formula Ia ($= I$ where $R^{10} = \text{hydroxyl}$),



Ia

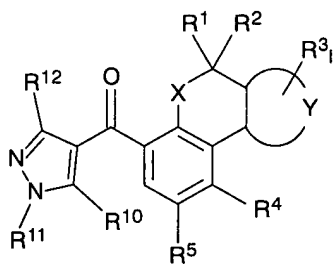
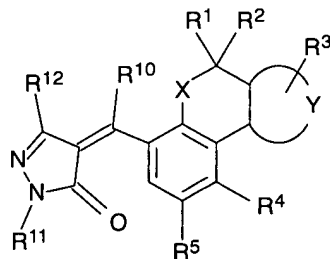
where the variables R^1 to R^5 , R^{11} and R^{12} , X , Y and l are as defined in claim 1, with a compound of formula III

 L^1-R^{13}

III

where the variable R^{13} is as defined in claim 1 and L^1 is a nucleophilically replaceable leaving group.

9. A process for preparing the compound of formula I where $R^{10} = OR^{13}$, SR^{13} , $NR^{15}R^{16}$ or N-bonded heterocyclyl as claimed in claim 1, which comprises reacting a compound of formula I β ($\equiv I$ where $R^{10} = \text{halogen}$),

I β 

where the variables R^1 to R^5 , R^{11} and R^{12} , X , Y and l are as defined in claim 1, with a compound of formula IV α , IV β , IV γ or IV δ

HOR^{13}
IV α

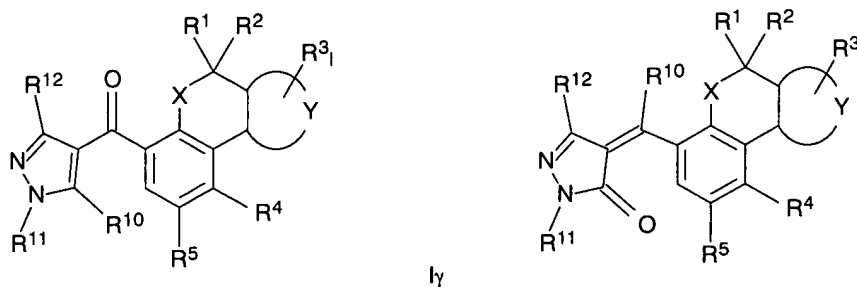
HSR^{13}
IV β

$NHR^{15}R^{16}$
IV γ

$H(\text{N-bonded heterocyclyl})$
IV δ

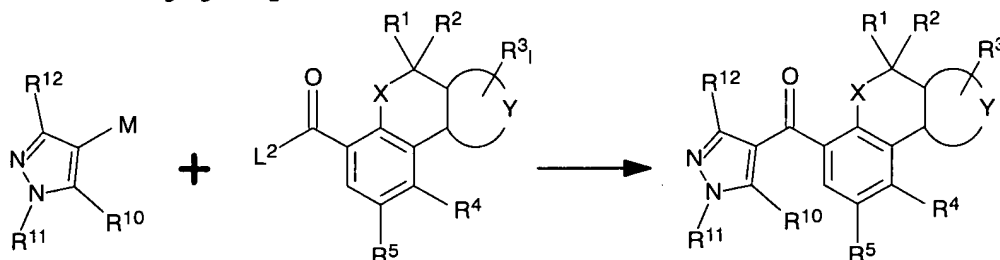
where the variables R^{13} to R^{16} are as defined in claim 1, optionally in the presence of a base.

10. A process for preparing the compound of formula I where $R^{10} = SO_2R^{14}$ as claimed in claim 1, which comprises reacting a compound of formula I γ (\equiv I where $R^{10} = SR^{14}$),

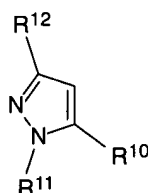


where the variables R^1 to R^5 , R^{11} and R^{12} , X , Y and l are as defined in claim 1, with an oxidizing agent.

11. A process for preparing the compound of formula I as claimed in claim 1, which comprises reacting a metalated pyrazole compound of formula V where M is a metal and R^{10} to R^{12} are as defined in claim 1, except for $R^{10} = \text{hydroxyl}$ and mercapto, with a tricyclic benzoic acid compound of formula VI α where R^1 to R^5 , X , Y and l are as defined in claim 1 and L^2 is a nucleophilically replaceable leaving group.

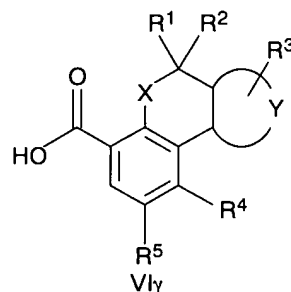
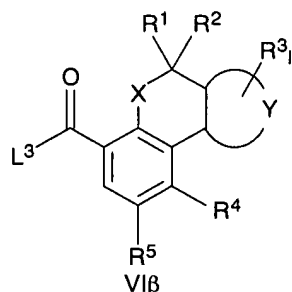


12. A process for preparing the compound of formula I α (\equiv I where $R^{10} = \text{hydroxyl}$) as claimed in claim 1, which comprises acylating a pyrazole of formula VII in which the variables R^{11} and R^{12} are as defined in claim 1



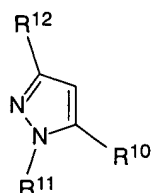
VII

with an activated tricyclic benzoic acid of formula VI β or with a tricyclic benzoic acid of formula VI γ ,

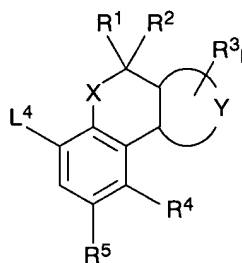


where the variables R^1 to R^5 , X , Y and l are as defined in claim 1 and L^3 is a nucleophilically replaceable leaving group, and rearranging the acylation product, optionally in the presence of a catalyst.

13. A process for preparing the compound of formula Ia (\equiv I where R^{10} = hydroxyl) as claimed in claim 1, which comprises reacting a pyrazole of formula VII in which the variables R^{11} and R^{12} are as defined in claim 1, or an alkali metal salt thereof,



with a tricyclic benzene compound of formula IX where L^4 is a leaving group and the variables X , Y , R^1 to R^5 and l are as defined in claim 1

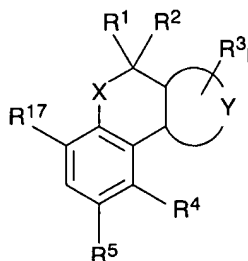


in the presence of carbon monoxide, a catalyst and a base.

14. A composition, comprising a herbicidally effective amount of at least one compound of formula I or an agriculturally useful salt thereof as claimed in claim 1 and auxiliaries which are customary for formulating crop protection agents.
15. A process for preparing the composition defined in claim 14, which comprises mixing a herbicidally effective amount of at least one compound of formula I or an agriculturally useful salt

thereof and auxiliaries which are customary for formulating crop protection agents.

16. A method for controlling undesirable vegetation, which comprises allowing a herbicidally effective amount of at least one compound of formula I or an agriculturally useful salt thereof as claimed in claim 1 to act on plants, their habitat or on seed.
18. A tricyclic benzoic acid compound of formula VI



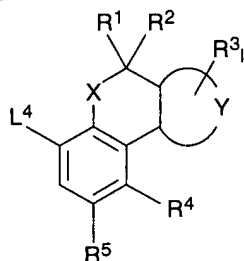
VI

in which the variables X, Y, R¹ to R³ and R⁵ and l are as defined in claim 1 and

R⁴ is nitro, halogen, cyano, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, C₁-C₆-alkylthio, C₁-C₆-haloalkylthio, C₁-C₆-alkylsulfinyl, C₁-C₆-haloalkylsulfinyl, C₁-C₆-alkylsulfonyl, C₁-C₆-haloalkylsulfonyl, aminosulfonyl, N-(C₁-C₆-alkyl)aminosulfonyl, N,N-di(C₁-C₆-alkyl)aminosulfonyl, N-(C₁-C₆-alkylsulfonyl)amino, N-(C₁-C₆-haloalkylsulfonyl)amino, N-(C₁-C₆-alkyl)-N-(C₁-C₆-alkylsulfonyl)amino or N-(C₁-C₆-alkyl)-N-(C₁-C₆-haloalkylsulfonyl)amino;

R¹⁷ is hydroxyl or a radical which can be removed by hydrolysis.

19. A tricyclic benzene compound of formula IX



IX

in which the variables X, Y, R¹ to R³ and R⁵ and l are as defined in claim 1 and

R⁴ is nitro, halogen, cyano, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkylthio, C₁-C₆-haloalkylthio, C₁-C₆-alkylsulfinyl, C₁-C₆-haloalkylsulfinyl, C₁-C₆-alkylsulfonyl, C₁-C₆-haloalkylsulfonyl, aminosulfonyl, N-(C₁-C₆-alkyl)aminosulfonyl, N,N-di(C₁-C₆-alkyl)aminosulfonyl, N-(C₁-C₆-alkylsulfonyl)amino, N-(C₁-C₆-haloalkylsulfonyl)amino, N-(C₁-C₆-alkyl)-N-(C₁-C₆-alkylsulfonyl)amino, N-(C₁-C₆-haloalkylsulfonyl)amino,

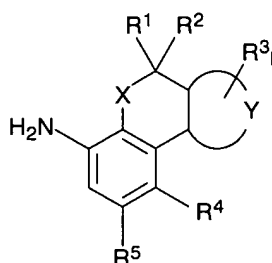
kyl)-N-(C₁-C₆-alkylsulfonyl)amino or N-(C₁-C₆-alkyl)-N-(C₁-C₆-haloalkylsulfonyl)amino;

R⁵ is hydrogen or C₁-C₆-alkyl;

L⁴ is halogen, C₁-C₆-alkylsulfonyloxy, C₁-C₆-haloalkylsulfonyloxy or phenylsulfonyloxy, where the phenyl ring of the lastmentioned radical may be unsubstituted or partially or fully halogenated and/or may carry one to three of the following radicals:

nitro, cyano, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy or C₁-C₄-haloalkoxy.

20. An aniline compound of formula XV

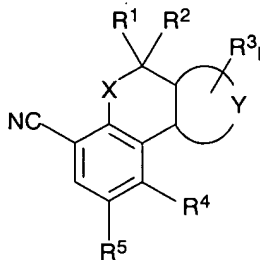


XV

in which the variables X, Y, R¹ to R³ and R⁵ and l are in each case as defined in claim 1 and

R⁴ is nitro, halogen, cyano, C₁-C₆-haloalkyl, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, C₁-C₆-alkylthio, C₁-C₆-haloalkylthio, C₁-C₆-alkylsulfinyl, C₁-C₆-haloalkylsulfinyl, C₁-C₆-alkylsulfonyl, C₁-C₆-haloalkylsulfonyl, aminosulfonyl, N-(C₁-C₆-alkyl)aminosulfonyl, N,N-di(C₁-C₆-alkyl)aminosulfonyl, N-(C₁-C₆-alkylsulfonyl)amino, N-(C₁-C₆-haloalkylsulfonyl)amino, N-(C₁-C₆-alkyl)-N-(C₁-C₆-alkylsulfonyl)amino or N-(C₁-C₆-alkyl)-N-(C₁-C₆-haloalkylsulfonyl)amino.

21. A nitrile compound of formula XVI



XVI

in which the variables X, Y, R¹ to R³ and l are in each case as defined in claim 1 and

R⁴ is nitro, halogen, cyano, C₁-C₆-haloalkyl, C₁-C₆-alkylthio, C₁-C₆-haloalkylthio, C₁-C₆-alkylsulfinyl, C₁-C₆-haloalkylsulfinyl, C₁-C₆-alkylsulfonyl, C₁-C₆-haloalkylsulfonyl, amino-

sulfonyl, N-(C₁-C₆-alkyl)aminosulfonyl, N,N-di-(C₁-C₆-alkyl)aminosulfonyl, N-(C₁-C₆-alkylsulfonyl)amino, N-(C₁-C₆-haloalkylsulfonyl)amino, N-(C₁-C₆-alkyl)-N-(C₁-C₆-alkylsulfonyl)amino or N-(C₁-C₆-alkyl)-N-(C₁-C₆-haloalkylsulfonyl)amino;
R⁵ is hydrogen or C₁-C₆-alkyl.

23. The compound of formula I defined in claim 1, wherein R¹⁰ is hydroxyl, mercapto, halogen, OR¹³, SR¹³, SO₂R¹⁴ or NR¹⁵R¹⁶.